

CLAIMS

1. A wireless communication apparatus comprising:

5 a measuring section that measures a reception quality of each of a plurality of sub-carriers within a communication band from a received signal;

a selecting section that selects a sub-carrier satisfying a predetermined condition relating to a measured reception quality from the plurality of sub-carriers; and

10 a reporting section that gives a reporting of a selection result of the selecting section.

2. The wireless communication apparatus according to claim 1, further comprising an acquisition section that
15 acquires information indicating designation from a higher-level station apparatus, wherein the selecting section selects a sub-carriers satisfying the predetermined condition in accordance with information indicating the designation.

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3. The wireless communication apparatus according to claim 2, wherein the reporting section transmits reception quality information only for a selected sub-carrier to give a reporting of the selection result.

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4. The wireless communication apparatus according to claim 2, wherein the acquisition section acquires

information indicating a number of sub-carriers to be selected, and the selecting section selects the number of sub-carriers in descending order of measured reception quality.

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5. The wireless communication apparatus according to claim 2, wherein the acquisition section acquires information indicating a reception quality threshold value, and the selecting section selects sub-carriers
10 with measured reception quality exceeding the threshold value.

6. The wireless communication apparatus according to claim 3, wherein the reporting section transmits
15 reception quality information with a selected sub-carrier or with a sub-carrier having a one-to-one correspondence with the selected sub-carrier.

7. The wireless communication apparatus according to
20 claim 6, further comprising a spreading section that spreads the reception quality information using a specific spreading code for each user, wherein the reporting section transmits spread reception quality information.

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8.. The wireless communication apparatus according to claim 3, wherein the reporting section transmits

identification information of one bit indicating that the selected sub-carrier satisfies the predetermined condition as the reception quality information.

5 9. The wireless communication apparatus according to claim 3, further comprising an error detection section that carries out error detection on the received signal, wherein the reporting section transmits a signal indicating a result of error detection as the reception
10 quality information.

10. The wireless communication apparatus according to claim 3, wherein the reporting section transmits a relative value between a value generated based on
15 reception quality of the selected sub-carrier and a predetermined value as the reception quality information.

11. A communication terminal apparatus comprising the wireless communication apparatus according to claim 1.
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12. A base station apparatus comprising:
a modulating section that modulates packet data using an M-ary number adaptively selected based on a reporting of a selection result where a sub-carrier
25 satisfying a predetermined condition relating to reception quality at an opposing communication apparatus is selected from a plurality of sub-carriers within a

communication band;

an encoding section that encodes the packet data using an encoding rate adaptively selected based on the reporting; and

- 5 a scheduling section that identifies a sub-carrier satisfying the predetermined condition based on the reporting, and carries out scheduling so that packet data of a higher M-ary number or encoding rate to an identified sub-carrier having superior reception quality.

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13. A reception quality reporting method comprising:

a measuring step of measuring reception quality of a plurality of sub-carriers within a communication band from a received signal every sub-carrier;

- 15 a selection step of selecting a sub-carrier satisfying a predetermined condition relating to measured reception quality from the plurality of sub-carriers; and

a reporting step of giving a reporting of a selection
20 result of the selection step.